Approaches to Behavioral Problems in Dementia

Ashley Stripling, Ph.D.
Nova Southeastern University
July 7, 2017
Disclosures

Dr. Stripling has no relevant financial or nonfinancial relationships to disclose.
Objectives

- Recognize the prevalence, cause and impact of behavioral and psychological symptoms of dementia
- Discuss treatment strategies for behavioral and psychological symptoms of dementia that target the individual, caregiver, and environment
- Articulate the importance of a collaborative team, including both health care professionals and family caregivers, within these treatment.
- Mobilize participants to take action to improve the delivery of care for patients with behavioral and psychological symptoms of dementia and their caregivers
“Dementia” is acquired cognitive decline in one or more areas caused by a variety of underlying neuropathologies\(^1\) (e.g. Alzheimer’s, vascular, lewy bodies, Pick, Parkinson, Huntington, etc.) that affects between 4 to 5 million older adults in the United states\(^2\).


Unfortunately, dementias often lead to behavioral and psychological symptoms of dementia (BPSD) or Inappropriate behaviors. In fact, 80-97% of individuals with dementia have at least 1 BPSDs at the onset of their cognitive symptoms.

Behavioral and psychological symptoms of dementia?

Types of behavioral and psychological symptoms of dementia*

<table>
<thead>
<tr>
<th>Delusions (distressing beliefs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hallucinations</td>
</tr>
<tr>
<td>Agitation:</td>
</tr>
<tr>
<td>• Easily upset</td>
</tr>
<tr>
<td>• Repeating questions</td>
</tr>
<tr>
<td>• Arguing or complaining</td>
</tr>
<tr>
<td>• Hoarding</td>
</tr>
<tr>
<td>• Pacing</td>
</tr>
<tr>
<td>• Inappropriate screaming, crying out, disruptive sounds</td>
</tr>
<tr>
<td>• Rejection of care (for example, bathing, dressing, grooming)</td>
</tr>
<tr>
<td>• Leaving home</td>
</tr>
<tr>
<td>Aggression (physical or verbal)</td>
</tr>
<tr>
<td>Depression or dysphoria</td>
</tr>
<tr>
<td>Anxiety:</td>
</tr>
<tr>
<td>• Worrying</td>
</tr>
<tr>
<td>• Shadowing (following care giver)</td>
</tr>
<tr>
<td>Apathy or indifference</td>
</tr>
<tr>
<td>Disinhibition:</td>
</tr>
<tr>
<td>• Socially inappropriate behavior</td>
</tr>
<tr>
<td>• Sexually inappropriate behavior</td>
</tr>
<tr>
<td>Irritability or lability</td>
</tr>
<tr>
<td>Motor disturbance (repetitive activities without purpose):</td>
</tr>
<tr>
<td>• Wandering</td>
</tr>
<tr>
<td>• Rummaging</td>
</tr>
<tr>
<td>Night-time behaviors (waking and getting up at night)</td>
</tr>
</tbody>
</table>

*Based on modified neuropsychiatric inventory-Q categories. Some behaviors under agitation need more research to determine whether they are part of agitation or their own entity (for example, rejection of care).
What does this look like?

Inappropriate behaviors have been divided into four main subtypes:

1. Physically aggressive behaviors (hitting, kicking or biting)
2. Physically nonaggressive behaviors (pacing, wandering, hoarding, inappropriately handling objects, resisting help with care)
3. Verbally nonaggressive agitation, (constant repetition of sentences or requests)
4. Verbal aggression (cursing or screaming)

---

Why does this happen?

36% had undetected illness\(^9\)

Are caregivers are “ready”?

AKA: Progressively lowered stress threshold model

---


What is the impact?

These behavioral and psychological symptoms of dementia cause a great deal of suffering for individuals with dementia and their family members.

Contributing to:

- Increased health care costs (~30% of the total annual $14,420)\textsuperscript{10}
- Increased likelihood for nursing home placement\textsuperscript{11,12}
- Excess morbidity, mortality and hospital stays\textsuperscript{13}
- Loss of quality of life for the patient and his or her family\textsuperscript{14}
- Caregiver Burden, Depression\textsuperscript{15} and decreased health\textsuperscript{16}

15 Ornstein, K., & Gaugler, J. E. (2012). The problem with "problem behaviors": a systematic review of the association between individual patient behavioral and psychological symptoms and caregiver depression and burden within the dementia patient–caregiver dyad. International Psychogeriatrics, 24(10), 1536-1552.
What do we do?

Prevention?

Unfortunately to date there has been NO research on the impact of prevention on the development of BPSD.

Future research should tackle progression of symptoms, and the effects of screening and monitoring.
So, What do we do?

The causes of Behavioral and psychological symptoms of dementia are complex often involving both family and professional caregivers, as well as patient centered care.

Non-pharmacological treatment, are the preferred first line approach of many organizations and expert groups\textsuperscript{17,18,19,20} (except in emergencies or where safety is a concern) but these recommendations have not been translated to the real world\textsuperscript{21}

\textsuperscript{20}American Psychiatric Association. (2013). Five things physicians and patients should question. choosing wisely. ABIM Foundation.
Non-pharmacological treatments

• In line with the previously discussed factors, this presentation will review three categories of non-pharmacological treatments, those targeting the:
  • Person with dementia
  • Caregiver
  • Environment.
Non-pharmacological treatments: Targeting the person with dementia

- “Well Established” Evidenced Based Practice
- Behavioral Techniques7,22,23,24,25,26,27,28 (Identify and modify antecedents and consequences of problem behaviors, increase pleasant events, individualized interventions based on progressively lowered stress threshold models that include problem solving and environmental modification:) Reduce BPSD and depression
- Limited support23,24
- Cognitive Stimulation Therapy29 (Stimulating thinking, memory and connections by discussing current events, music, word games)
- Music Therapy30,31 (symptoms of aggression, agitation and wandering, more RCT needed)
- Snoezelen32 (placing the person with dementia in a soothing and stimulating environment known as a “snoezelen room”), some short term benefits
- Massage and Touch Therapy33 (reduced agitation in the short term, but more RCT needed)

Non-pharmacological treatments: Targeting the person with dementia

- Insufficient Evidence\textsuperscript{22, 24}
- Emotion-Oriented approached \textsuperscript{25,29, 34}
  - Validation/Psychodynamic therapy (working through unresolved conflicts/maintain the self)
  - Reminiscence therapy\textsuperscript{35}, (discussion of past experiences), 1 study improved mood, some evidence of decrease in behavior problems
  - Simulated presence therapy\textsuperscript{27} (use of audiotaped recordings of family members’ voices), Mixed results PTSDs improved in some, but worsen in others
- Cognition-orientation approaches \textsuperscript{34}
  - Reality Orientation Therapy
  - Memory training and rehabilitation\textsuperscript{37}
- Aromatherapy\textsuperscript{38} (use of fragrant plant oils), limited evidence for agitation
- Light therapy\textsuperscript{39} some support for reduced agitation
- Transcutaneous Electrical Nerve Stimulation\textsuperscript{40} (TENS, application of an electrical current through electrodes attached to the skin), short-lived neuropsychological improvements

Non-pharmacological treatments: Targeting the person with dementia

• What do Behavioral Strategies look like?

<table>
<thead>
<tr>
<th>Examples of Specific Behavioral Targets</th>
<th>Possible Targeted Strategies</th>
</tr>
</thead>
</table>
| Hearing voices                          | • Evaluate hearing or adjust amplification of hearing aids  
  • Assess quality and severity of symptoms  
  • Determine whether they present an actual threat to safety or function |
| Wandering/Elopement                     | • Identify triggers for elopement and modify them  
  • Notify neighbors and police of patient's condition and potential for elopement  
  • Outfit with ID (e.g. Alzheimer's Association Safe Return program) |
| Nighttime wakefulness                   | • Evaluate sleep routines and sleep hygiene  
  • Assess environment for possible contributions (e.g. temperature, noise, light, shadows)  
  • Eliminate caffeine  
  • Create a structure that includes daily activity and exercise and a quiet routine for bedtime (e.g. calming activity or music)  
  • Limit daytime napping  
  • Use a nightlight  
  • Nighttime respite for caregiver |
| Repetitive questioning                  | • Respond with a calm reassuring voice  
  • Use of calm touch for reassurance  
  • Inform patient of events only as they occur  
  • Structure with daily routines  
  • Use of distraction and meaningful activities |
| Aggression                              | • Determine and modify underlying cause of aggression (e.g. psychosis, pain, particular caregiver interaction), evaluate triggers and patterns  
  • Warn caregiver not to confront or return physically  
  • Discuss other self-protection strategies with caregiver (e.g. distract, backing away from patient, leaving patient alone if they are safe, and seeking help)  
  • Limit access to or remove dangerous items  
  • Create a calmer, more soothing environment |

Non-pharmacological treatments: Targeting the Family Caregiver

• Most approaches provide psychoeducation and tailored problem solving training to a family caregiver to identify and modify precipitating causes of BPSD.\(^7\), \(^42\)

• For example
  • Tailored Activity Program (TAP)\(^43\): Home-based Occupational therapists trained to educate caregivers and problem solve BPSDs
  • Care of Persons with Dementia in their Environments (COPE)\(^44\): Health professionals assess underlying medical problems and train caregivers
  • Advancing Caregiver Training (ACT)\(^45\): Health professionals train to identify and modify potential triggers of problem behaviors

---


\(^44\) Gitlin LN, Winter L, Dennis MP, Hodgson N, Hauck WW. A biobehavioral home-based intervention and the well-being of patients with dementia and their caregivers. JAMA 2010;304:983-91.

Non-pharmacological treatments: Targeting the Family Caregiver

- These psychoeducational, problem solving, supportive, behavioral treatment programs have effectively:
  - Decrease
    - BPSDs (Shadowing, repetitive questioning, agitation, argumentation)\textsuperscript{43,45,47,48} more effectively than medication\textsuperscript{51}
    - Caregivers distress due to BPSDs\textsuperscript{43,45,46,49,50}
    - Depression in both patients and Family Caregivers\textsuperscript{28,48}
    - Patient placement\textsuperscript{45}
    - Caregiver burden\textsuperscript{43,45,47}
    - Negative Communication\textsuperscript{45}
    - IADL dependence\textsuperscript{49}
  - Increase
    - Caregiver confidence/mastery\textsuperscript{43,45,48,49} and skills\textsuperscript{43,47}
    - Patient engagement/mood\textsuperscript{42}
    - Caregiver wellbeing\textsuperscript{45}

Non-pharmacological treatments: Targeting the Family Caregiver

- What types of psychoeducation?\textsuperscript{7,41,42,43,44,45}
  - Behaviors are not intentional but caused by dementia
  - Disease progression (decreased executive functioning, planning) so guidance is helpful
  - Avoid confrontation through clear communication and relaxed rules (calm voice, simple directions, limited choices, closed questions)
  - Importance of self-care (exercising, eating right, respite, stress reduction, attending their own medical appointments)
  - Identifying and utilizing a support network

\textsuperscript{44} Gitlin LN, Winter L, Dennis MP, Hodgson N, Hauck WW. A biobehavioral home-based intervention and the well-being of patients with dementia and their caregivers. \textit{JAMA} 2010;304(9):983-91.
Non-pharmacological treatments: Targeting the Environment

- Environment approaches are “well established” treatments that utilize collaborative care to improve patients surroundings and reduce: 7, 27, 52
  - Overstimulation (for example, excess noise, people, or clutter in the home) or Understimulation (for example, lack of anything of interest to look at)
  - Safety problems (for example, access to household chemicals or sharp objects or easy ability to exit the home)
  - Lack of activity and structure (for example, no regular exercise or activities that match interests and capabilities)
  - Lack of established routines (for example, frequent changes in the time, location, or sequence of daily activities)

- And appear effective in preventing and reducing behavioral symptoms, (i.e. wandering, agitation, elopement) and improving patient well being and acceptance of care in both facilities 53 and the home 48, 54.

Non-pharmacological treatments: Targeting the Environment

- Environment “well established” treatments solutions: 7, 27, 52

<table>
<thead>
<tr>
<th>Overstimulating or understimulating environment</th>
<th>Regulate the amount of stimulation in the home by decluttering the environment, limiting the number of people in the home, and reducing noise by turning off radios and television sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe environment</td>
<td>Make sure the person does not have access to anything (e.g. sharp objects) that could cause harm to themselves or others</td>
</tr>
</tbody>
</table>
| Lack of activity                               | • Keep the person engaged in activities that match interests and capabilities  
• Relax the rules – there is no right or wrong way to perform an activity if the person is safe                                           |
| Lack of structure or established routines      | • Establish daily routines  
• Changing the time, location, or sequence of dialy activities can trigger outbursts  
• Allow enough time for activities  
• Trying to rush activities can also trigger behaviors |

Non-pharmacological treatments: Targeting the Environment

• What might this look like?
  • Case Example:
    • Community Living Centers & Climate Change

• Collaborative care?
  • Interdisciplinary teams: Nursing (CAN, LPN, RN), Speech, Occupational, Social Work, Recreational, Physical, Dietician, Chaplin, Music, Psychologist, Physician
When Safety is a concern:
Pharmacological approaches

Note: Currently no medications have been approved by the Food and Drug Administration for BPSDs in the US, so all drugs are used off label for agitation and aggression

• Atypical antipsychotics (risperidone, aripiprazole, olanzapine, haloperidol) have the strongest evidence base, but benefits are only modestly\textsuperscript{55,56,57,58} and don’t appear to outweigh adverse effects (i.e. stroke, metabolic syndrome, extrapyramidal symptoms, cognitive worsening, seizures, sedation, abnormal gait)\textsuperscript{7,54} and mortality risk (1.7-fold increase)\textsuperscript{59,60}

• Tricyclic antidepressants (sertraline, citalopram) have been shown to have limited benefit\textsuperscript{61,62} depression\textsuperscript{61,62} and agitation\textsuperscript{63} but also hold adverse effects (i.e. orthostatic hypotension, seizures, glucose dysregulation, anticholinergic effects, weight changes, sexual dysfunction, falls)\textsuperscript{64}

• Cholinesterase inhibitors and memantine (donepezil, rivastigmine) demonstrated mixed findings\textsuperscript{7} but again hold adverse effects (diarrhea, nausea, and vomiting, and less commonly with symptomatic bradycardia and syncope)\textsuperscript{65}

• Mood stabilizers (valproic acid, carbamazepine) also demonstrated mixed findings\textsuperscript{7} but again hold adverse effects (i.e. alopecia, thrombocytopenia, hyperammonemia, pancreatitis, liver injury, cognitive changes, and mortality)\textsuperscript{66}
So what can we do?:
Putting it all together

- 1st step: Education (Congrats you’ve already taken a step!)
- 2nd Step: **Mobilize** for action to improve care delivery, consider DICE!

---

Behavioral and psychological symptoms of dementia (BPSD) are prevalent and harmful (to patients and treatment providers).

Non-pharmacological interventions are the frontline treatment, specifically behavioral techniques for patients, problem-solving strategies for caregivers, and environmental interventions; but medication may be necessary.

Collaborative care (like DICE) can reduce BPSD but, It takes a village!
Questions?
Comments?
Concerns?
References

References


References


